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Cc: [PRESTON Gerry](#)
Subject: Portland Harbor T&F and food web models
Date: 03/02/2006 02:24 PM

Hi All,

This is to let you know that I've completed a working draft of both the transport and fate and food web models for Portland Harbor in line with the specifications put forth and discussed at our meetings on this topic.

The transport and fate model is written in STELLA. It dynamically simulates water and sediment concentrations in 34 river segments (33 in the river + Shipyard Lagoon) on a daily basis for at least 10 years. I think 20 years is very possible, limited only by my aging computer. It also allows you to model cross-flows between segments and back-flows upstream at low flows. Each segment can have its own unique parameters.

The food web model is essentially the Arnot & Gobas model evaluated by Windward. I re-did the template supplied by Windward as a Visual Basic program linked to the STELLA output. This gave me a chance to both go over the model line-by-line and Windward's report (all the pertinent info is in there but it's arranged poorly and mixed in with a lot of extraneous material). The food web model uses the time-dependent output from STELLA to estimate residue levels in eight aquatic species in each segment for up to 10 years. It takes about 30 seconds to do one segment, so figure 15 minutes for all segments. It can also run with a Monte Carlo processor but I haven't tried that yet (can't risk the aging computer).

I'm just finishing an "extended outline" (~60 pages + appendices) that tries to explain the bare bones of all this. It's not fully complete because there's been no model corroboration due to a lack of data in a useful format. However, this is probably just as well since you need to look at what's been done so far and provide some feedback. Probably also a meeting to get into it further.

Because the report mixes several different formats, I can't send all of it electronically. So I'm planning to distribute hardcopies. Who else, beyond those on this email, might need copies? Let me know.

Thanks.

Bruce